

City of Grand Rapids

Energy and Climate Goals and Programs

January 29, 2018

GVSU Koeze Business Ethics Initiative

Alison Waske Sutter, Sustainability Manager

Office of Sustainability



Items to Review:

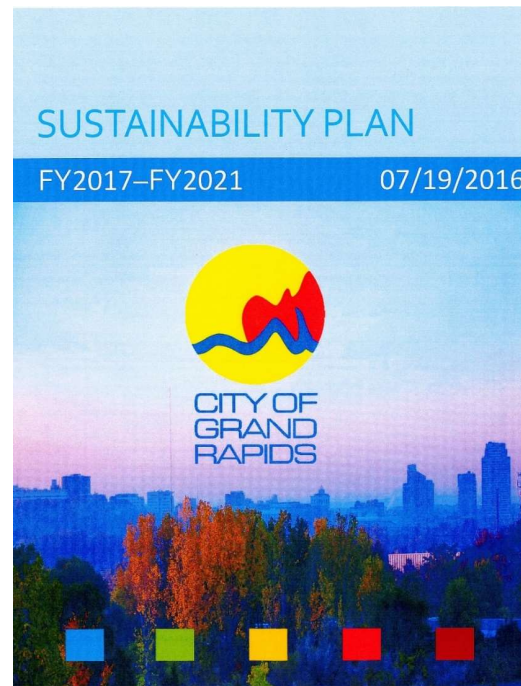
- City of Grand Rapids' commitment to Sustainability and the Quadruple Bottom Line
 - Energy and Climate as key components of our Environmental Quality pillar
- Energy and climate goals and progress to date
- Energy/Carbon programs (PACE, 2030 District, Zero Cities Project)
- Establishing a strong foundation for a successful energy future
- Questions and Answers

Sustainability Commitment:

- City of Grand Rapids as a government entity was one of the first to adopt sustainability practices and strategies in the mid-2000s
- City's first Sustainability Plan was published in 2006
- Adopted our first five-year Sustainability Plan (FY11 – FY15) in spring 2010
- Published the [5th Year Progress Report on the FY11 – FY15 Sustainability Plan](#) in 2015
- Currently operating under our second five-year [Sustainability Plan \(FY17 – FY21\)](#)

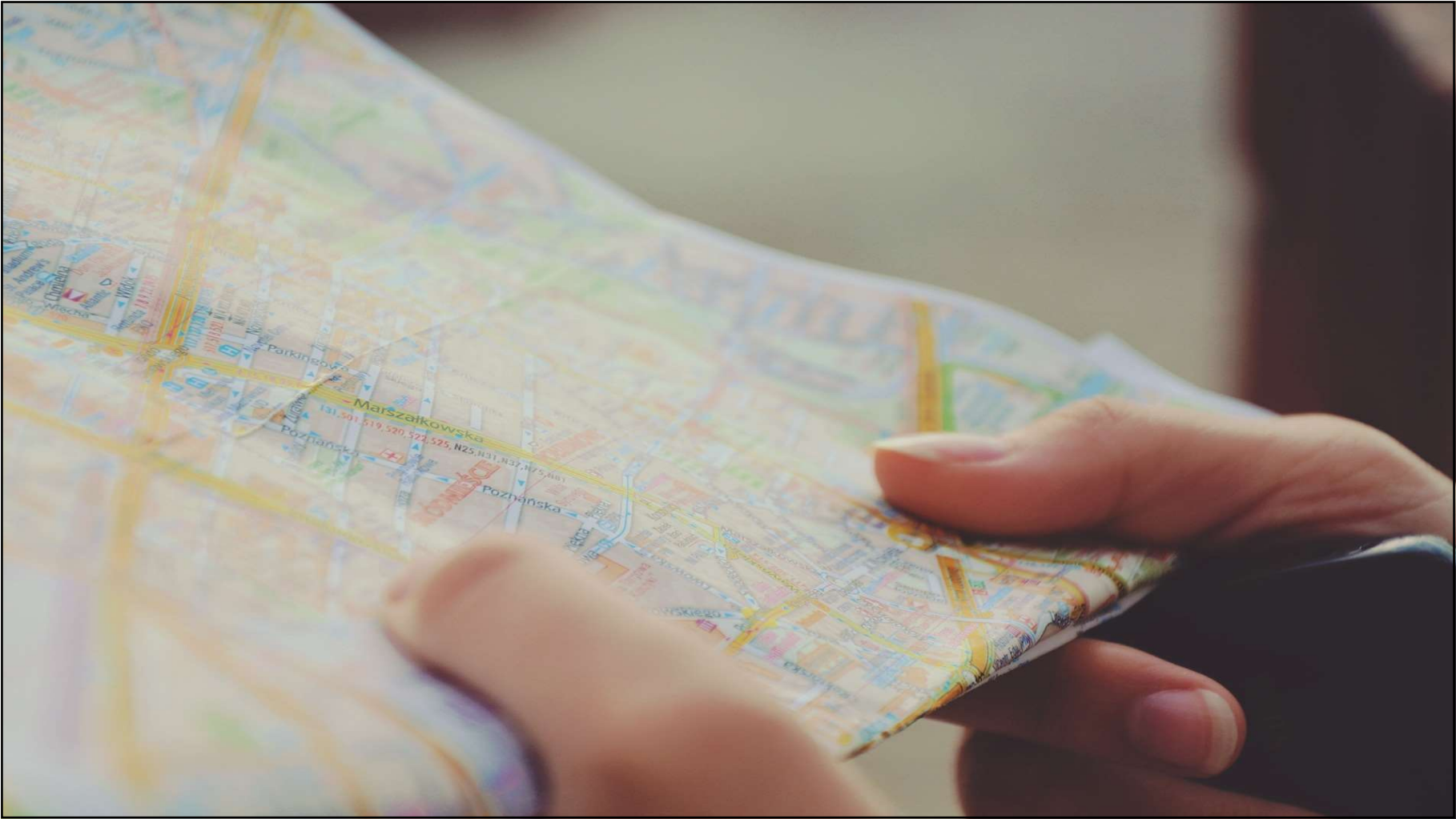
FY17 – FY21 Sustainability Plan

- Strategic plan for the City
- Long-term focus
- 4 pillars making up the Quadruple Bottom Line
- 10 themes
- 114 targets
 - 17% completed
 - 36% are being implemented



Quadruple Bottom Line





Environmental Quality Pillar

Resilient Systems

Balanced
Transportation

Sustainable Assets

Environmental Quality Pillar

5. Resilient Systems

5.1 Reduction of Energy Footprint

5.2 Strengthen Climate Protection and Resiliency

5.3 Expansion of Reuse and Recycling Opportunities

5.4 Protection and Enhancement of Natural Systems

5.5 Low Impact Development

6. Balanced Transportation

6.1 Increase Mobility and Promote Use of Alternate Modes of Transportation

6.2 Provide Parking Alternatives

7. Sustainable Assets

7.1 Maintain Sustainable Asset Management

7.2 Implement Vital Streets and Sidewalks

7.3 Maintain Parks, Pools, and Playgrounds

5. Resilient Systems: Goals and Outcomes

5.1 Reduction of Energy Footprint

- 5.1.1 Implement initiatives to counteract the effects of GHG emissions to provide a cleaner and greener community and a higher quality of life.

5.2 Strengthen Climate Protection and Resiliency

- 5.2.1 Integrate operations and preparedness measures into City plans to respond to climate change related threats and disasters.

5.3 Expansion of Reuse and Recycling Opportunities

- 5.3.1 Expand reuse and recycling opportunities, as well as composting of yard waste to decrease the amount of waste sent to landfills.

5.4 Protection and Enhancement of Natural Systems

- 5.4.1 Integrate protection and restoration of natural systems into City plans as they provide ecological “services” (including flood control and storm water management).
- 5.4.2 Integrate quality design, high-intensity mixed-use, efficient land use, greening of the cityscape, and alternatives to automobile dependence into City plans and ordinances.

5.5 Low Impact Development

- 5.5.1 Integrate LID (green infrastructure) into City plans to manage storm water as close to its source as possible for land development.

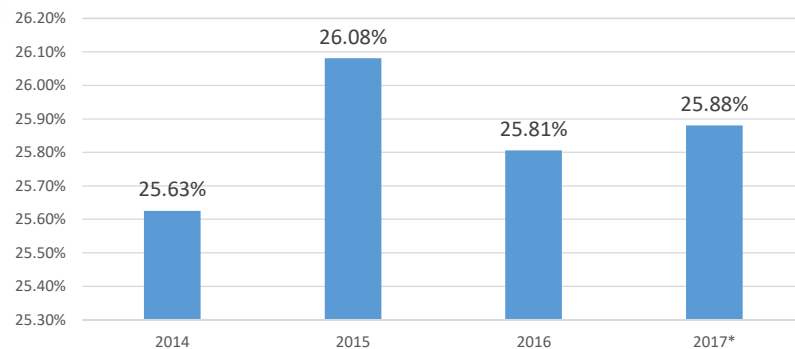
Reduction of Energy Footprint Goals (Targets):

- Operate City buildings with 100% renewable electricity by 2025
- Decrease greenhouse gas emissions (GHGs) by 25% by 2021 as compared to 2009
- Ensure the production, conversion and renovation of committed affordable housing is on target with goals to reduce GHG emissions within the City

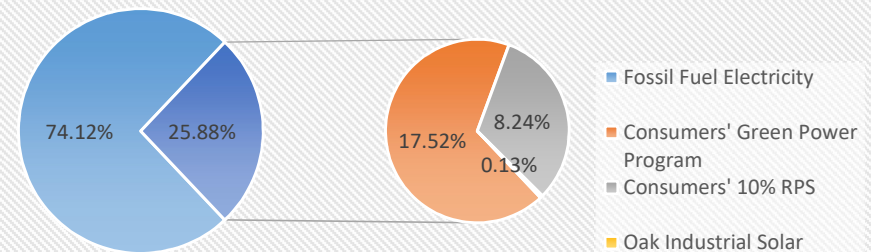
Renewable Energy:

- 26% of City buildings are run on renewable electricity as of the end of FY17 (June 30, 2017)
- When the Water Resource Recover Facility's Biodigester is fully functioning in 2019, we anticipate our renewable electricity will be closer to 40-50%

City of Grand Rapids % of Electricity Generated from Renewables (Goal = 100% by 2025)



FY2017 City of Grand Rapids Renewable Electricity



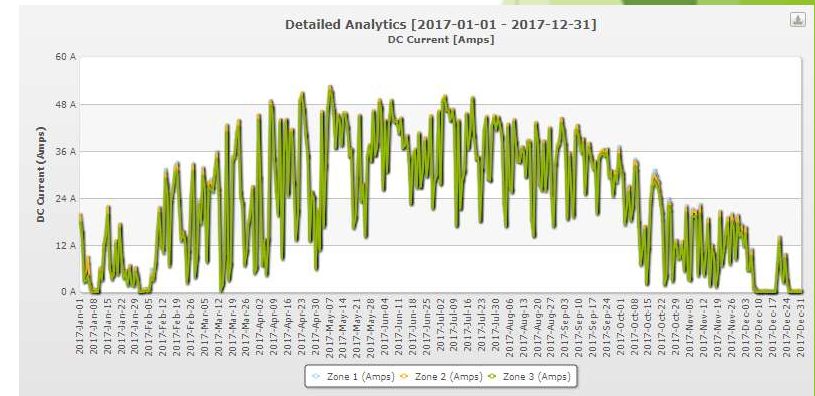
WRRF biodigester groundbreaking – December 14, 2017

Photos and videos of the groundbreaking



Renewable Energy - Solar:

- Oak Industrial Drive water building solar array
 - 429 solar panels installed in mid 2012
 - \$500,000 project, half funded by a federal grant
 - Estimated payback is 8 years and life expectancy is 30 years
 - Installed by Inovateus Solar
 - 121,000 kWh in FY17
- Exploring solar at other City facilities:
 - Butterworth Landfill
 - Lake Michigan Filtration Plant
 - City parking garages and lots
 - City owned buildings



Strengthen Climate Protection and Resiliency Goals (Targets):

- Implement climate resilience and best practices in infrastructure planning by considering best available climate projections and incorporating climate adaptation planning into capital, operating and maintenance programs by June 30, 2021
- Implement 100% onside stormwater management to all new City infrastructure plans by June 30, 2025

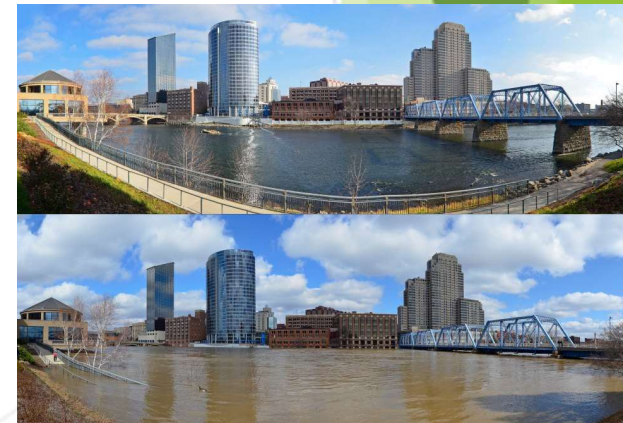
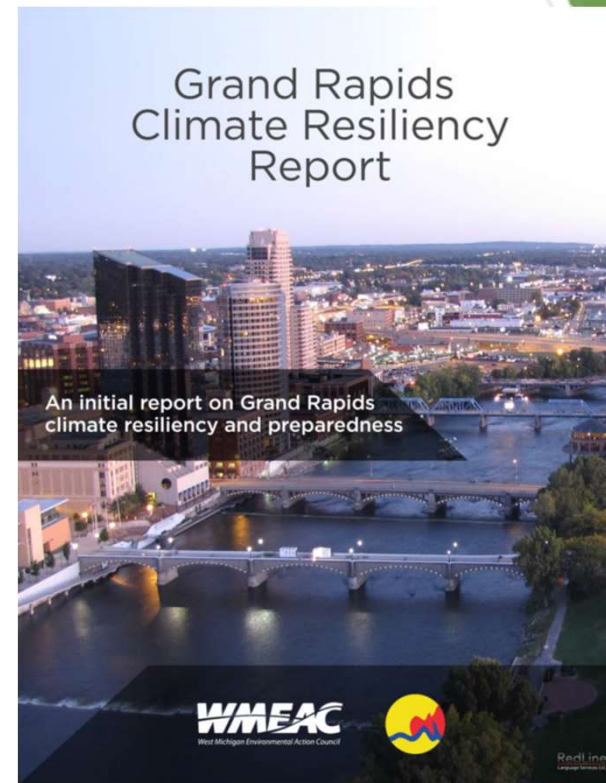


Photo by mLive

Climate Work

- [Grand Rapids Climate Resiliency Report](#) (Dec. 2013)
- [We Are Still In](#) (June 2017)
- [Climate Mayors](#)



Energy/Carbon Programs:

- PACE (Property Assessed Clean Energy) Program
- Grand Rapids 2030 District
- Zero Cities Project



PACE Program



Are you a property owner? Want to install energy efficiency upgrades or renewable energy? Check if you're eligible for the Property Assessed Clean Energy (PACE) program.

PACE Program:

- State created program, PA 270 of 2010
 - Property Assessed Clean Energy Program
- Grand Rapids City Commission approved a PACE District in August 2017
- Economic development incentive that requires no taxpayer money. City is allowing businesses to use an assessment to make clean energy projects cash flow
- Financing through property tax special assessment for energy efficiency and renewable energy projects
- Lender becomes beneficiary of a tax lien



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Current
Energy Bill

CURRENT ENERGY COSTS

SAVINGS!!!

PACE Payment

New Energy
Bill

ENERGY COSTS WITH PACE

PACE Program:

- Eligibility
 - Available to commercial, industrial, multi-family and non-profit organizations
 - Property value > \$800,000
 - Average annual utility bills > \$60,000
 - Existing debt on the property < 80% of value of property
 - Property Owner is current on all property tax obligations
- Key requirements
 - Complete a PACE Inquiry Form: www.grandrapids.mi/PACE
 - Energy analysis with a PACE approved contractor
 - Underwriting by an approved PACE lender
 - Energy audit (ASHRAE Level II)
 - Secure lender consent
 - Finalize financing documents, submit a PACE application, which includes the PACE Special Assessment Agreement
 - City approval
 - Complete the project, monitor performance and repay the loan



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PACE Program:

- Financing terms
 - 100% financing
 - 10-25 year terms with fixed interest rates
 - Contractor must guarantee that energy savings will exceed the owner's PACE payments over the life of the project on projects over \$250,000
 - Requires mortgagee consent
- Other benefits
 - Payments (and benefits) "run with the land"
 - Non-recourse (no personal guarantee)
 - Can be passed through to tenants
 - Can't be used for anything else
 - Accounting treatment as operating expense

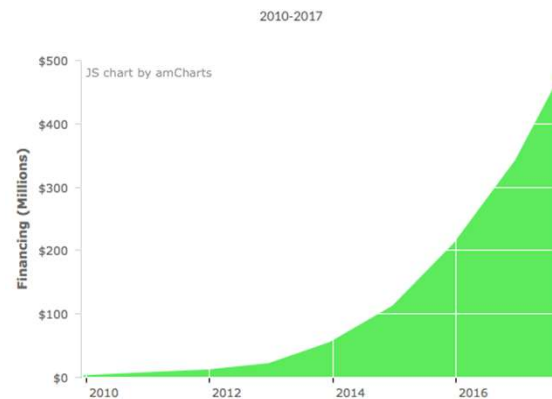


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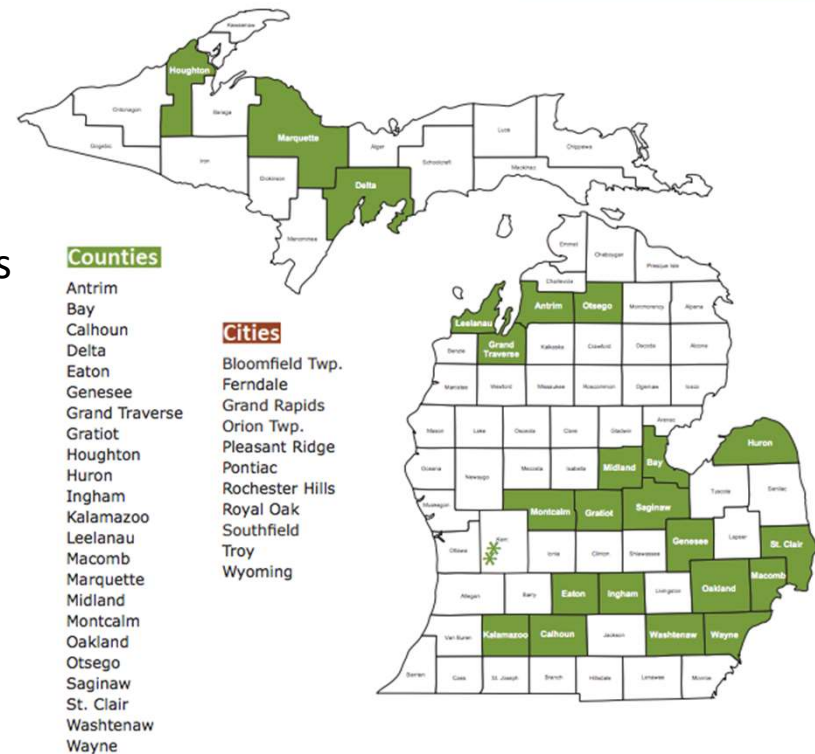
PACE Program:

- Michigan
 - 34 local governments
 - 68% of Michigan's population
- Nationally
 - 1,097 projects, \$482 million, 7,222 jobs

Cumulative C-PACE Financing



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Grand Rapids 2030 District:

- Public-private partnership committed to creating high-performing buildings that increase marketability and profitability for property owners, improve environmental impact and strengthen the greater community's vibrancy.
- U.S. Green Building Council, West Michigan Chapter is the program's administrator and the program is managed by a District Advisory Council
- www.2030districts.org/grandrapids
- We were the 11th district created (Dec. 2015) and there are currently 18 districts

GRAND RAPIDS
2030
DISTRICT®

Grand Rapids 2030 District:

- Voluntary program asking building owners (commercial, industrial, multi-family and non-profits) to commit to steep energy, water and transportation emission cuts by 2030
 - Baseline = 2003 CBECs score
- Applies to existing buildings and new construction
- Recently expanded the District to any building within the City of Grand Rapids
- Must enter energy and water utility data into Energy Star and share your account with the GR2030 District

GRAND RAPIDS
2030
DISTRICT®



Reduce Energy



Manage Water



Slash CO2
Emissions

Grand Rapids 2030 District:

- 32 property owners and 50 buildings are currently enrolled
- Over 10 million square feet committed
- An example of some building owners participating:



Grand Rapids 2030 District Members

GRAND RAPIDS
2030
DISTRICT®

Zero Cities Project:

- Three-year grant funded project to develop a policy roadmap toward a zero net carbon building sector by 2050
 - Zero net carbon: produce on-site, or procure, enough carbon free renewable energy to meet the building operations' energy consumption
- 12 U.S. cities selected to participate
- Policy process informed by technical analysis that will include community collaboration and a focus on equity
- Meant to create a plan the City will implement to achieve the zero net carbon goal by all buildings – with economic incentives and planning programs
- Thank you to USGBC West Michigan and the Wege Foundation
- Note: Consumers Energy offering a Zero Net Energy Pilot program

Boston, MA
Boulder, CO
Cambridge, MA
Grand Rapids, MI
Minneapolis, MN
New York, NY
Palo Alto, CA
Phoenix, AZ
Portland, OR
San Francisco, CA
Seattle, WA
Washington, D.C.

[Michigan Radio, Zero Cities Project aims to reduce Grand Rapids' carbon footprint to zero by 2050 \(Jan. 22, 2018\)](#)

[GRBJ, Trending toward zero carbon, Grand Rapids is one of 12 U.S. cities selected to participate in three-year Zero Cities Project \(Dec. 29, 2017\)](#)

Planning for a Successful Energy Future:

- Energy Team (City staff)
- Comprehensive Energy Plan
 - Energy and GHG baseline, data tracking and reporting
 - Energy efficiency
 - Renewable Energy
 - Electric vehicles, microgrids, communication/promotion/engagement, etc.
- Energy Advisory Committee (citizen board)
- Stakeholder engagement

Questions?



Thank you!

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